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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,237	04/13/2001	Robert Van Kommer	33226	6191
116	7590	07/31/2007	EXAMINER	
PEARNE & GORDON LLP			VO, HUYEN X	
1801 EAST 9TH STREET				
SUITE 1200			ART UNIT	PAPER NUMBER
CLEVELAND, OH 44114-3108			2626	
			MAIL DATE	DELIVERY MODE
			07/31/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/835,237	KOMMER, ROBERT VAN
	<b>Examiner</b>	<b>Art Unit</b>
	Huyen X. Vo	2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 15 May 2007.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-5,7-24,26-28 and 30-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-5,7-24,26-28 and 30-59 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 13 April 2001 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_

## DETAILED ACTION

### ***Response to Amendment***

1. Applicant's arguments filed 5/15/2007 have been fully considered but they are not persuasive. Saylor et al. fully anticipate the limitation regarding "*wherein each of said interactive voice response applications includes an executable component for execution by said hosting system, said executable component comprising at least one of an executable file, a Java Bean, a Corba-component, a compiled software module, and a pre-compiled software module*" (VPAGE Database 50 in figure 3, voice response application *includes TML, XML, VoiceXML, WML, and others in col. 21, lines 10-45; these are executable components*).
  
2. In response to applicant's argument regarding "the references fail to teach the use of any speaker dependent models that are updated without the use of a training phase, as Maes clearly teaches that such a training phase is necessary", the claim language does not specifically claim "speaker dependent models that are updated without the use of a training phase". Furthermore, the phrase "user-specific speech models adapted to specific users" in the claim can be interpreted as speech models belonged to particular users that are used for the particular users upon identification.

### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 51 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

5. Claim 51 is drawn to a “program” *per se* as recited in the preamble (*the specification does not mention the term computer-readable medium containing computer program product*) and as such is non-statutory subject matter. See MPEP § 2106.IV.B.1.a. Data structures not claimed as embodied in computer readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention, which permit the data structure's functionality to be realized. In contrast, a claimed computer readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory. Similarly, computer programs claimed as computer listings *per se*, i.e., the descriptions or expressions of the programs are not physical “things.” They are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional

interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-5, 7-12, 15, 18-24, 26-28, 30-39, 42-50, 52, 53-59, 51(30)-51(39), and 51(42)-51(50) are rejected under 35 U.S.C. 103(a) as being unpatentable over Saylor et al. (US 6792086) in view of Maes (US 6088669).

8. Regarding claims 1, 30, 53-59 and 51(30), Saylor et al. disclose a voice portal hosting system, intended to be connected to a first voice telecommunication network in order for a plurality of users in said network to establish a connection with the system using voice equipment, said system comprising:

a memory in which a plurality of interactive voice response applications providing interactive response functionality is stored, each of said applications including an executable component for execution by said hosting system (*VPAGE Database 50 in figure 3, voice response application includes TML, XML, VoiceXML, WML, and others in col. 21, lines 10-45*);

a common speech recognition module (*voice to text system 62 in figure 3*);  
a user identification module for identifying a user (*col. 7, line 58 to col. 8, line 15*);  
uploading means for independently uploading said plurality of interactive voice  
response applications, to said system, by a plurality of independent value-added service  
providers (*col. 20, line 64 to col. 21, line 45 and or referring to figure 3, content provider*  
*70 provides information to VPAGE Server 22*), and wherein the identified user interacts  
with one or more of said interactive voice response application (*col. 8, lines 1-38,*  
*identified is allowed to access voice services*), and wherein each of said interactive  
voice response applications includes an executable component for execution by said  
hosting system, said executable component comprising at least one of an executable  
file, a Java Bean, a Corba-component, a compiled software module, and a pre-compiled  
software module (*VPAGE Database 50 in figure 3, voice response application includes*  
*TML, XML, VoiceXML, WML, and others in col. 21, lines 10-45; these are executable*  
*components*).

Saylor et al. fail to specifically disclose means for storing a plurality of user-specific speech models adapted to specific users for use by the common speech recognition module; means for retrieving the user-specific speech model of the identified user from said plurality of models; and wherein said one or more interactive voice response applications utilize said retrieved user-specific speech models via said common speech recognition module for recognizing speech of the identified user.

However, Maes teaches means for storing a plurality of user-specific speech models adapted to specific users for use by the common speech recognition module

(*speaker-dependent HMM models 440 in figure 1*); means for retrieving the user-specific speech model of the identified user from said plurality of models (*the operation of figure 1, after the speaker is identified by speaker identification module 410, the HMM models of the identified speaker is retrieved and loaded into speech recognizer 120*); and wherein said one or more interactive voice response applications utilize said retrieved user-specific speech models via said common speech recognition module for recognizing speech of the identified user (*the operation of figure 1, after the speaker is identified by speaker identification module 410, the HMM models of the identified speaker is retrieved and loaded into speech recognizer 120*).

Since Saylor et al. and Maes are analogous art because they are from the same endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Saylor et al. by incorporating the teaching of Maes in order to improve speech recognition accuracy by using user-specific speech models.

9. Regarding claims 50, and 51(50), Saylor et al. disclose a method for allowing each of a plurality of independent value-added service providers to set up an interactive voice response applications each including an executable component for execution by a voice portal hosting system commonly used by said plurality of valued-added service providers and which can be used by a plurality of users (*the operation of figure 1, multiple users access voice services at the server having a common speech recognizer, and independent service providers connected to the server providing voice response applications*), said method comprising the steps of:

independently uploading, through a second telecommunication network, said interactive voice response applications to said system for providing interactive voice response functionality (*col. 20, line 64 to col. 21, line 45 and or referring to figure 3, content provider 70 provides information to VPAGE Server 22*);

identifying a user calling said system (*col. 7, line 58 to col. 8, line 15*);

retrieving speech models for the speech recognizer (*voice to text system 62 in figure 3, uses system speech recognition models to recognize speech*);

executing one or more of said voice response applications in response to the user calling said system (*VPAGE Database 50 in figure 3, voice response application includes TML, XML, VoiceXML, WML, and others in col. 21, lines 10-45*), said executing including interacting with said user via said common speech module using said retrieved speech model for recognizing the speech of the user (*voice to text system 62 in figure 3, uses system speech recognition models to recognize speech*), wherein each of said interactive voice response applications includes an executable component for execution by said hosting system, said executable component comprising at least one of an executable file, a Java Bean, a Corba-component, a compiled software module, and a pre-compiled software module (*VPAGE Database 50 in figure 3, voice response application includes TML, XML, VoiceXML, WML, and others in col. 21, lines 10-45; these are executable components*).

Saylor et al. fail to specifically disclose means for storing a plurality of user-specific speech models adapted to specific users for use by the common speech recognition module; means for retrieving the user-specific speech model of the identified

user from said plurality of models; and wherein said one or more interactive voice response applications utilize said retrieved user-specific speech models via said common speech recognition module for recognizing speech of the identified user.

However, Maes teaches means for storing a plurality of user-specific speech models adapted to specific users for use by the common speech recognition module (*speaker-dependent HMM models 440 in figure 1*); means for retrieving the user-specific speech model of the identified user from said plurality of models (*the operation of figure 1, after the speaker is identified by speaker identification module 410, the HMM models of the identified speaker is retrieved and loaded into speech recognizer 120*); and wherein said one or more interactive voice response applications utilize said retrieved user-specific speech models via said common speech recognition module for recognizing speech of the identified user (*the operation of figure 1, after the speaker is identified by speaker identification module 410, the HMM models of the identified speaker is retrieved and loaded into speech recognizer 120*); and wherein said common speech models are adapted during each dialog between said users and any of said interactive voice response applications (*col. 4, lines 42-57, speech model adaptation*).

Since Saylor et al. and Maes are analogous art because they are from the same endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Saylor et al. by incorporating the teaching of Maes in order to improve speech recognition accuracy by using user-specific speech models.

10. Regarding claim 52, Saylor et al. disclose a voice portal hosting system allowing a plurality of users to establish a connection with said system using voice equipment for interacting with one or more of a plurality of service providers, said system comprising:

means for independently uploading a plurality of interactive voice response applications from said service providers, to said system, via a communication channel (*col. 20, line 64 to col. 21, line 45 and or referring to figure 3, content provider 70 provides information to VPAGE Server 22*), each of said voice response applications for providing interactive voice response functionality for a corresponding one of said service providers when executed by said hosting system (*VPAGE Database 50 in figure 3, voice response application includes TML, XML, VoiceXML, WML, and others in col. 21, lines 10-45*);

means for storing said plurality of interactive voice response applications (*VPAGE Database 50 in figure 3, voice response application includes TML, XML, VoiceXML, WML, and others in col. 21, lines 10-45*);

a common speech recognition module (*voice to text system 62 in figure 3*);

means for storing a plurality of speech models adapted to specific users for use by the common speech recognition module (*voice to text system 62 in figure 3, uses system speech recognition models to recognize speech*);

a user identification module for identifying a user calling said system via another communication channel (*col. 7, line 58 to col. 8, line 15*);

means for retrieving the speech model of the identified user from said plurality of models (*voice to text system 62 in figure 3, uses system speech recognition models to recognize speech*), wherein

the identified user interacts with one or more of said interactive voice response applications (col. 8, lines 1-38, *identified is allowed to access voice services*); and

wherein each of said interactive voice response applications includes an executable component for execution by said hosting system, said executable component comprising at least one of an executable file, a Java Bean, a Corba-component, a compiled software module, and a pre-compiled software module (*VPAGE Database 50 in figure 3, voice response application includes TML, XML, VoiceXML, WML, and others in col. 21, lines 10-45; these are executable components*).

Saylor et al. fail to specifically disclose means for storing a plurality of user-specific speech models adapted to specific users for use by the common speech recognition module; means for retrieving the user-specific speech model of the identified user from said plurality of models; said one or more interactive voice response applications utilize said retrieved user-specific speech model via said common speech recognition module for recognizing speech of the identified user, and further wherein said common speech models are adaptable during dialogue between said users and any of said interactive voice response applications.

However, Maes teaches means for storing a plurality of user-specific speech models adapted to specific users for use by the common speech recognition module (*speaker-dependent HMM models 440 in figure 1*); means for retrieving the user-

specific speech model of the identified user from said plurality of models (*the operation of figure 1, after the speaker is identified by speaker identification module 410, the HMM models of the identified speaker is retrieved and loaded into speech recognizer 120*); said one or more interactive voice response applications utilize said retrieved user-specific speech model via said common speech recognition module for recognizing speech of the identified user (*the operation of figure 1, after the speaker is identified by speaker identification module 410, the HMM models of the identified speaker is retrieved and loaded into speech recognizer 120*), and further wherein said common speech models are adaptable during dialogue between said users and any of said interactive voice response applications (col. 4, lines 42-57, *speech model adaptation*).

Since Saylor et al. and Maes are analogous art because they are from the same endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Saylor et al. by incorporating the teaching of Maes in order to improve speech recognition accuracy by using user-specific speech models.

11. Regarding claims 2-5, 31-35, and 51(31)-51(35), Saylor et al. further disclose the voice portal hosting system, wherein said common speech recognition module comprises a common user profile database (col. 7, *line 58 to col. 8, line 15*), and wherein said common user profile database includes user preferences (col. 7, *line 58 to col. 8, line 15*), and wherein said user preferences include a delivery address for goods and/or services ordered with said value-added service providers (col. 7, *line 58 to col. 8, line 15*), wherein said user preferences include a billing address and/or preferences for

goods and services ordered with said value-added service providers (*col. 7, line 58 to col. 8, line 15*), wherein said common speech recognition module uses user-specific speech models (*col. 7, line 58 to col. 8, line 15, voice print authentication*).

12. Regarding claims 20-24, 26-28, 44-49, and 51(44)-51(49), Saylor et al. further disclose the voice portal hosting system, wherein at least a plurality of said interactive voice response applications use a common billing module and a common clearing center for dispatching the collected amounts to said value-added service providers (*Billing Module 46 in figure 2*), wherein said common billing module allows for the billing of transactions between said users and said value-added service providers on a common bill prepared by the operator of said voice portal hosting system (*Billing Module 46 in figure 2*), and wherein at least a plurality of said users have a deposit account on said voice portal hosting system which can be used for transactions with a plurality of said value-added service providers (*Billing Module 46 in figure 2*), wherein at least a plurality of said interactive voice response applications use a user authentication module based on an electronic signature and/or on biometric parameters of said users (*col. 7, line 58 to col. 8, line 15, voice print authentication*), wherein said second telecommunication network is a TCP/IP network (*col. 14, lines 5-25 and/or referring to network 20 in figures 1-3*), wherein at least some of said interactive voice response applications are described with VoiceXML documents (*col. 21, lines 10-45*), wherein at least one free interactive voice response application is made available by the operator of the system (*col. 21, lines 10-45*), and wherein said free interactive voice response

application includes a free directory assistance service (*col. 36, line 53 to col. 37, line 8*).

13. Regarding claims 7-8, 36, and 51(36), Saylor et al. fail to specifically disclose the voice portal hosting system, wherein said common speech recognition module uses user-specific speech models, means for adapting said common speech models associated to a user during each dialogue between said user and each of said interactive voice response applications, and wherein said means for adapting said common speech models uses recorded users' speech samples for adapting said common speech models off-line.

However, Maes teaches speech recognition module using user-specific speech models (*speaker-dependent HMM models 440 in figure 1*), means for adapting said common speech models associated to a user during each dialogue between said user and each of said interactive voice response applications (*col. 4, lines 42-57, speech model adaptation*), and wherein said means for adapting said common speech models uses recorded users' speech samples for adapting said common speech models off-line (*storing as speaker-dependent models 440 in figure 1*).

Since Saylor et al. and Maes are analogous art because they are from the same endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Saylor et al. by incorporating the teaching of Maes in order to improve speech recognition accuracy.

14. Regarding claims 9-10, Saylor et al. fail to specifically disclose the voice portal hosting system of claim 1, wherein said common speech recognition module uses Hidden Markov Models, and further comprising a Hidden Markov Models adaptation module for adapting said models to said user, and wherein said Hidden Markov Models adaptation module allows for an incremental adaptation of said models. However, Maes teaches a common speech recognition module uses Hidden Markov Models, and further comprising a Hidden Markov Models adaptation module for adapting said models to said user (*HMM models 440 in figure 1 and adapted in col. 4, lines 42-57*), and wherein said Hidden Markov Models adaptation module allows for an incremental adaptation of said models (*col. 4, lines 42-57*).

Since Saylor et al. and Maes are analogous art because they are from the same endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Saylor et al. by incorporating the teaching of Maes in order to improve speech recognition accuracy.

15. Regarding claims 11-12, 37-38, and 51(37)-51(38), Saylor et al. fail to specifically disclose the voice portal hosting system, wherein said common speech recognition module uses user-specific language models, and means for adapting said common language models associated to a user during each dialogue between said user and each of said interactive voice response applications. However, Maes teaches a common speech recognition module uses user-specific language models (*speaker-dependent HMM models 440 in figure 1*), and means for adapting said common

language models associated to a user during each dialogue between said user and each of said interactive voice response applications (col. 4, lines 42-57).

Since Saylor et al. and Maes are analogous art because they are from the same endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Saylor et al. by incorporating the teaching of Maes in order to improve speech recognition accuracy.

16. Regarding claims 15, 18-19, 39, 42-43, 51(39), and 51(42)-51(43), Saylor et al. fail to specifically disclose the voice portal hosting system, wherein at least a plurality of said interactive voice response applications use a common user identification module run on said system, wherein said user identification module uses a voice-based user identification module, wherein said common speech recognition module uses a speaker-dependant speech recognition algorithm, and wherein said speaker is identified by said common user identification module.

However, Maes further teaches that at least a plurality of said interactive voice response applications use a common user identification module run on said system, wherein said user identification module uses a voice-based user identification module, wherein said common speech recognition module uses a speaker-dependant speech recognition algorithm, and wherein said speaker is identified by said common user identification module (*referring to the operation of figure 1, specifically speaker-dependent codebooks 430 in figure 1 for used by speaker identification module 410 in figure 1*).

Since Saylor et al. and Maes are analogous art because they are from the same endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Saylor et al. by incorporating the teaching of Maes in order to identify the user and the user's profile for used by the speech recognition to improve speaker recognition accuracy by using speech speaker-dependent codebook trained by users in advance.

17. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saylor et al. (US 6792086) in view of Maes (US 6088669), as applied to claim 1, and further in view Beyda et al. (US 6487277).

18. Regarding claims 13-14, Saylor et al. fail to specifically disclose a voice portal hosting system of claim 1, wherein said common speech recognition module uses selections previously made by said users, and wherein said selections previously made by said users are stored in said voice portal hosting system for improving the arborescence of the menus. However, Beyda et al. teach common speech recognition module uses selections previously made by said users, and wherein said selections previously made by said users are stored in said voice portal hosting system for improving the arborescence of the menus (*see abstract*).

Since Saylor et al. and Beyda et al. are analogous art because they are from the same endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Saylor et al. by incorporating the teaching of Beyda et al. in

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order to tailor the presentation order to the needs of each individual user to improve system's efficiency.

19. Claims 16-17, 40-41, 51(40-41) are rejected under 35 U.S.C. 103(a) as being unpatentable over Saylor et al. (US 6792086) in view of Maes (US 6088669), as applied to claims 15 and 39, respectively, and further in view of Woods et al. (US 6510417).

20. Regarding claims 16-17, 40-41, and 51(40-41), Saylor et al. fail to specifically disclose that the user identification module uses an identification of the equipment used by said user in said first telecommunication network, and being operated by a telecom operator of said first telecommunication network, wherein said user identification module uses an identification of the equipment used by said user in said first telecommunication network even when said identification is not available for the other B-subscribers of said first telecommunication network. However, Woods et al. teach that the user identification module uses an identification of the equipment used by said user in said first telecommunication network, and being operated by a telecom operator of said first telecommunication network, wherein said user identification module uses an identification of the equipment used by said user in said first telecommunication network even when said identification is not available for the other B-subscribers of said first telecommunication network (*col. 24, lines 39-41*).

Since Saylor et al. and Woods et al. are analogous art because they are from the same endeavors, it would have been obvious to one of ordinary skill in the art at the

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time of invention to modify Saylor et al. by incorporating the teaching of Woods et al. in order to allow the system to automatically authenticate users based on their phone numbers by using caller-ID procedure.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen X. Vo whose telephone number is 571-272-7631. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

7/23/2007

HV

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